

## A NEW CHIHUAHUAN DESERT ROSE (ROSACEAE)

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### ABSTRACT

***Rosa woodsii* var. *maderensis*** is described from the Sierra de la Madera in central Coahuila, Mexico. It is distinguished by its smaller, glabrous leaves, reduced ovary and stamen number and smaller hips with few fruits.

Continued studies in connection with M. C. Johnston's Chihuahuan Desert Flora have uncovered distinct populations of a native rose from the Sierra de la Madera near Cuatro Ciénegas in central Coahuila. The new taxon, which represents the southernmost known stand of *R. woodsii*, is characterized by reduced leaf size and reduced number of ovaries and stamens per flower.

***Rosa woodsii* Lindl. var. *maderensis* Henrickson var. nov.**

A var. *woodsii* foliis parvioribus glabris 3.5–5.5 cm longis foliolis 5–7 serratis dentibus ad apicem glandulis stipitatis rubris, pistillis paucioribus 4–6(–8), (non 15–30), fructis parvioribus acheniis 1–4 differt (Fig. 1).

Slender, gracefully arching shrubs 1–2(–3) m high; young stems greenish, turning maroon, waxy, smooth; bark gray; enations few, infrastipular, divergent, straight, slender, stramineous, 7–14 mm long, abruptly expanded vertically to an obovate base 2.5–5.5 mm long; internodes glabrous. Leaves oblong-ovate in outline, 3.5–5.5 cm long, 2–3 cm broad; petioles 1–2 cm long; stipules 4.5–10 mm long, the pair 1.5–3(–5) mm wide, adnate to petiole except for free, oblong-lanceolate, 1–2 mm long tips, stipitate-glandular along margins, otherwise glabrous, glaucous, green to reddish; leaflets 5–7, obovate to oblong-obovate, (5–)8–14(–19) mm long, 4–9(–13) mm wide, rounded to retuse at tip, broadly cuneate to rounded at base, at margins closely serrate, often partially doubly serrate along sides, with acute to acuminate teeth each tipped with a stipitate or sessile gland, glabrous, green above, whitish-glaucous beneath; terminal leaflets largest, on petioles 4–8 mm long, lower lateral leaflets reduced in size, with petioles 0.5–1.5 mm long; rachis glabrous to sparsely stipitate-glandular; glands sometimes continuing to midvein on lower leaf surface. Flowers mostly solitary at new stem tips on glabrous pedicels 2.5–5 mm long; bracts

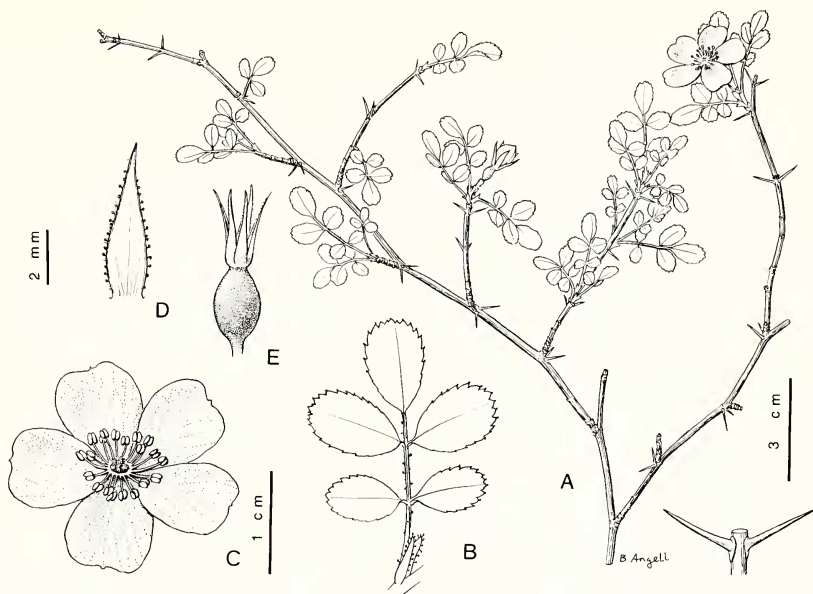


FIG. 1. *Rosa woodsii* var. *maderensis* Henrickson. A. Branch showing infrastipular enations (enlarged on lower right), and new shoots of season (Henrickson & Prigge 15296, TEX). B. Leaf showing stipitate glands on stipule margins, rachis (Henrickson & Prigge 15296, TEX). C. Flower with only 20 stamens (Wendt & Lott 1371A, LL). D. Abaxial surface of sepal. E. Immature hip showing characteristic ellipsoidal shape, persistent sepals (both Wendt *et al.* 1826, TEX). Magnifications as indicated: 3 cm scale for A; 1 cm scale for B-C, E; 2 mm scale for D.

oblong-ovate, stipule-like but broader; hypanthium narrowly ovoid, 4–5 mm long, 2–3 mm wide, glabrous; sepals lanceolate, 6–11 mm long, to 1.5–2.5 mm wide, attenuate to caudate, entire, glabrous outside, the outer margins often stipitate-glandular, villous inside and along margins when eglandular, persistent, erect on fruit; petals ob-ovate, emarginate at tip, 12–14 mm long, 9–12.5 mm wide, pink to white at base or throughout; stamens 20–40, filaments 3–4 mm long, white, glabrous; anthers 0.9–1.3 mm long, yellow; ovaries 4–6(–8), setose above; styles stramineous, villous, barely exserted, expanded at truncated stigmatic tips. Hips orange- to bright-red, 8–10 mm long, 6–7 mm wide; achenes 1–3(–4), broadly ellipsoidal, stramineous, setose at tip, 4.5–6 mm long, ca. 3 mm wide.

TYPE: México, Coahuila; ca. 42 (air) km wnw. of Cuatro Ciénegas on n. slope of Sierra de la Madera, 14 km w. by road from Rancho Cerro de la Madera up n.-facing Cañón Desiderio in oak-pine forest; low shrubs 0.6–1 m high; petals pink-white; 2000–2300 m, 12 Aug 1976, near 27°08'N, 102°31'W. *J. Henrickson and B. Prigge 15296*. (Holotype: TEX; isotypes: GH, MEXU, NY, RSA).

The new taxon occurs on rocky, moist, shaded slopes and margins in wooded higher canyons of the limestone Sierra de la Madera from about 2200 to 2900 m elevation with *Pinus strobiformis*, *P. arizonica*, *Pseudotsuga menziesii*, *Cupressus arizonica*, *Juniperus flaccida*, *Quercus gravesii*, *Quercus pringlei*, *Rhammus betulaeifolia*, *Arctostaphylos pungens*, etc. It flowers from August to September.

PARATYPES: Mexico, Coahuila, Sierra de la Madera, Cañón de la Hacienda, 5 Aug 1973, *Henrickson & Wendt 11879* (TEX, MO); 10 May 1972, *M. C. Johnston et al. 10958* (LL); Cañón de la Barrica, on se. side of Picacho El Pajarito, 29 Aug 1975, *Wendt & Lott 1371A* (LL) 1371 (LL); Cañón Desiderio, 28 Sep 1976, *Wendt et al. 1812* (TEX, 2 sheets); Cañón del Agua, 9 Sep 1939, *C. H. Muller 3237* (GH, LL); 2 km e. of Picacho de Zozáya, 13 Sep 1941, *I. M. Johnston 9026* (GH, 2 sheets).

The new taxon clearly lies within the highly variable and widespread *Rosa woodsii* complex (Erlanson 1934) of central and western North America, having mostly 5–7, oblong-obovate, rather thin leaflets with serrate margins, attached stipules, terete infrastipular enations, glabrous hypanthia, and narrow, externally glabrous, internally villous, persistent sepals. Within this complex, it has some characters typical of *Rosa fendleri* Crepin and *R. hypoleuca* Wooten and Standley, namely conspicuous stipitate glands on leaflet and stipule margins and a tendency for doubly serrate leaflet margins.

This complex of taxa has been treated as a series of distinct species by Rydberg (1918) and as a highly variable species by Erlanson (1934), whose field observations and experimental evidence showed that many of the characteristics Rydberg used in his treatment tended to exhibit Mendelian assortment and tended to be variable within many populations. Her experimental evidence showed up to five nominal species identifiable from offspring grown from seeds of single plants within this complex (Erlanson 1934). She relegated 14 of Rydberg's species to synonymy under *R. woodsii*. More recently, Hitchcock et al. (1961) have recognized two varieties within *R. woodsii* for the Pacific Northwest; and Martin and Hutchins (1980) have recognized most of Rydberg's taxa, making a series of illegitimate varietal combinations under *R. woodsii* in their New Mexico flora.

This new variety differs from the other taxa in this complex by its highly reduced ovary number of 4–6(–8) per flower (not 15–30), and its commensurately smaller, more ellipsoidal hips containing often only 1–3(–4) achenes. Some of the other characteristics of this new taxon, such as glabrous, small leaves, reduced stamen number, and largely glabrous internodes, occur frequently in the *R. woodsii* complex, but not in this combination.

The collections of the new taxon are also quite uniform in most characteristics including leaf glabrosity, leaf size, presence of stipitate or sessile reddish glands on tips of leaflet serrations, straight, slender

infrastipular enations, glabrous, narrow hypanthium and short sepal length and small flower size. Differences occur mainly in the extent of the red-tipped, stipitate glands, which may continue onto the mid-vein of the lower leaflet surface in some collections, but may be present or absent on the abaxial surface on some stipules. Stamen number also varies from around 20 to 40 in available collections.

Because this new taxon is certainly recognizable in its features, relatively uniform in its characteristics, and isolated in its occurrence, its recognition at least at the infraspecific level is supported. Much work, of course, needs to be done on the variability inherent in the *R. woodsii* complex sensu lato.

#### ACKNOWLEDGMENTS

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